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allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Applicant respectfully requests reconsideration of claims 1-23.

The Examiner has rejected claims 1-3, 15, and 16 under 35 U.S.C. § 103(a) as being unpatentable over Wiher et al. (U.S. Patent No. 6,081,530) "in view of obviousness skill in the art." Applicant respectfully disagrees. Applicant submits that the elements, relationships, and functionality of the claimed invention are absent in Wiher et al. and that, not only is there no suggestion in the prior art to combine or modify the teachings of Wiher et al., but that there is not enough relevant disclosure in Wiher et al. to even begin such combination or modification.

Regarding claims 1 and 15, the Examiner alleges that Wiher et al. discloses a system comprising a plurality of line card managers and identifies those line card managers as "master control shelf, elements 211-214." However, elements 211-214 appear to denote line card shelves, not master control shelves. Thus, it is unclear which elements of Wiher et al. the Examiner alleges to be line card managers. Nonetheless, the Examiner admits that Wiher et al. does not teach that each line card manager includes an arbiter and a router and that Wiher et al. does not teach disclose that a router couples the corresponding output of the plurality of outputs of the switch core and a pair of line cards. Thus, Wiher et al. fails to disclose a plurality of line card managers.

The Examiner alleges that it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the functionality of the MCP in Wiher's system in order to control the line cards more effectively. Yet the Examiner does not show how the teachings of Wiher et al. could be so modified, nor does the Examiner reveal anything that would tend to motivate one of ordinary skill in the art toward the elements, relationships, and functionality of the claimed invention. The Examiner cites column 17, lines 4-19, of Wiher et al., yet that portion of Wiher et al. states that "[c]ontrol and configuration information exchanged between a MCP and the MLAs, trunk cards, LSMs, and line cards includes OAMP data such as VPI/VCI header translation information, software updates, system test data, and system monitoring data." Thus, the MCP appears to be unsuited for any sort of modification to attempt to cause it to function as a line card manager, as such "control and configuration information" would appear to be inadequate to allow the MCP to provide the functionality of an arbiter or router with respect to data of the sort that would pass through a switch core.

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Thus, Applicant submits that Wiher et al. fails to render obvious the claimed invention, as set forth in claims 1 and 15. Therefore, Applicant submits that claims 1 and 15 are in condition for allowance.

Regarding claims 2 and 16, the Examiner asserts that Wiher et al. discloses a line card manager that has "a buffer to temporarily store data cells received from or being transmitted to over the interfaces" and cites column 18, lines 38-41, of Wiher et al. Column 18, lines 38-41, of Wiher et al. mention interface control circuitry 1122. Applicant notes that interface control circuitry appears to be part of trunk card 1100, which appears to conflict with the Examiner's other attempts to assert that Wiher et al. discloses a line card manager.

The Examiner further states that "the main and backup MCP provide ingress data from a buffer to a switch core based on the selection information," citing column 17, lines 11-19, of Wiher et al. Applicant submits that the MCPs of Wiher et al. are described as exchanging OAMP data, not as providing ingress data from a buffer to a switch core. As noted above, the MCP appears to be unsuited for any sort of modification to attempt to cause it to function as a line card manager, as such "control and configuration information" would appear to be inadequate to allow the MCP to provide the functionality of an arbiter or router with respect to data of the sort that would pass through a switch core.

Thus, Applicant submits that Wiher et al. fails to render obvious the claimed invention, as set forth in claims 2 and 16. Therefore, Applicant submits that claims 2 and 16 are in condition for allowance.

Regarding claim 3, the Examiner states that Wiher does not disclose a buffer comprising a first and second buffer. However, the Examiner states that Wiher teaches that every line card in the system has a buffer and cites element 520 of Figure 5 and column 8, lines 34-43, of Wiher et al. The Examiner alleges that it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the buffer of each line card in Wiher's system in order to minimize the structure of the system. Firstly, Applicant notes that element 520 appears to be an element of line card shelf multiplexer 500, not of a line card. Secondly, Applicant notes that, even if element 520 were an element of a line card, Wiher et al. still would not disclose a line card manager comprising buffering circuitry operably coupled to the arbiter, as set forth in claim 2. Thirdly, Applicant notes that mere

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combination of buffers in order to minimize the structure of a system would not yield buffering circuitry as set forth in claim 3.

Thus, Applicant submits that Wiher et al. fails to render obvious the claimed invention, as set forth in claim 3. Therefore, Applicant submits that claim 3 is in condition for allowance.

The Examiner has rejected claims 4, 5, and 17-19 under 35 U.S.C. § 103(a) as being unpatentable over Wiher et al. as applied to claims 1 and 15 above, and further in view of Tsuzuki (U.S. Patent No. 5,398,235). Applicant respectfully disagrees. Applicant submits that the elements, relationships, and functionality of the claimed invention are absent from both Wiher et al. and Tsuzuki et al. and that, not only is there no suggestion in the prior art to combine or modify the teachings of Wiher et al. and Tsuzuki et al., but that there is not enough relevant disclosure in Wiher et al. and Tsuzuki et al. to even begin such combination or modification.

Regarding claims 4 and 17, the Examiner admits that Wiher et al. does not disclose selection information determining an active or inactive line card of a line card pair and the arbiter preferentially passing active line card data over inactive line card data. Nonetheless, the Examiner asserts that Tsuzuki et al. discloses a system comprising a selection information signal to determine an active switch and inactive switch and that the system preferentially passes data through an active switch over an inactive switch. However, the Examiner does not cite a portion of Tsuzuki et al. to support the assertion that the system of Tsuzuki et al. preferentially passes data through an active switch over an inactive switch, and Applicant has not been able to locate any support for that assertion in Tsuzuki et al. Moreover, Applicant asserts that the active and standby cell switches of Tsuzuki et al. are non-analogous to an active line card of a line card pair and an inactive line card. In fact, in the "Background of the Invention" on pages 1 and 2 of the present application, Applicant has already described disadvantages associated with techniques that require more switching bandwidth than their usable switching bandwidth and those that involve an additional switching core. While Tsuzuki et al. may differ from the techniques described in the "Background of the Invention," because it provides a standby cell switch in addition to an active cell switch, it shares the inefficiencies of those techniques, while the present invention overcomes the disadvantages of those techniques. Thus, by disclosing a disadvantageous technique without teaching an approach to overcome the disadvantages in accordance with the claimed invention, Tsuzuki et al. teaches away from the claimed invention.

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Thus, Applicant submits that neither Wiher et al. nor Tsuzuki et al., either alone or in combination, render obvious the claimed invention as set forth in claims 4 and 17. Therefore, Applicant submits that claims 4 and 17 are in condition for allowance.

Regarding claim 5, the Examiner admits that Wiher et al. does not disclose that when an idle state is present in the active line card, the arbiter switches data to the inactive line card, but asserts that Tsuzuki et al. teaches that when an idle cell is detected, the controller "determines to active the stand by switch," citing column 5, lines 41-58, of Tsuzuki et al. Applicant respectfully disagrees. Applicant can find nothing in column 5, lines 41-58, of Tsuzuki et al. that supports the assertion that "when an idle cell is detected, the controller determines to active the stand by switch." Rather, as suggested by column 5, line 64, to column 6, line 1, of Tsuzuki et al., the causal relationship between idle cells and the system change-over signal of Tsuzuki et al. appears to be reversed (i.e., the generation of a system change-over signal in the system of Tsuzuki et al. appears to affect the operation of the idle cell detector 7). Regardless, neither Wiher et al. nor Tsuzuki et al., either alone or in combination, render obvious the claimed invention as set forth in claim 5. Therefore, Applicant submits that claim 5 is in condition for allowance.

Regarding claim 18, the Examiner states that it would have been obvious for one having ordinary skill in the art at the time the invention was made to adapt a "system change-over signal" as disclosed by Tsuzuki et al. into the Wiher et al. system in order to control the line cards more effectively. Applicant respectfully disagrees. As Applicant has noted above, the teachings of Tsuzuki et al. are non-analogous to the claimed invention, and Tsuzuki et al., in fact, teaches away from the claimed invention. Moreover, there is no suggestion in the prior art to combine the teachings of Wiher et al. and Tsuzuki et al. Thus, Applicant submits that neither Wiher et al. nor Tsuzuki et al., either alone or in combination, render obvious the claimed invention as set forth in claim 18. Therefore, Applicant submits that claim 18 is in condition for allowance.

Regarding claim 19, the Examiner states that it would have been obvious to one having ordinary skill in the art at the time the invention was made to add the buffer into Wiher's system in order to control data flow from an input to an output. Applicant submits that no motivation is shown that would have led one of ordinary skill in the art to buffer data in the manner set forth in claim 19. Moreover, Applicant submits that the absence in Wiher et al. of the elements, relationships, and

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functionality of the claimed invention would prevent an attempted addition of a buffer into Wiher's system from yielding the claimed invention as set forth in claim 19. Thus, Applicant submits that neither Wiher et al. nor Tsuzuki et al., either alone or in combination, render obvious the claimed invention as set forth in claim 19. Therefore, Applicant submits that claim 19 is in condition for allowance.


Regarding claims 12-14, submits that, for the reasons set forth above, Wiher et al. does not render obvious claims 12-14. Therefore, Applicant submits that claims 12-14 are in condition for allowance.

The Commissioner is hereby authorized to charge any fees which may be required, or credit any overpayment to Deposit Account No. 50-1566.

In conclusion, Applicant has overcome all of the Office's rejections, and early notice of allowance to this effect is earnestly solicited. If, for any reason, the Office is unable to allow the Application on the next Office Action, and believes a telephone interview would be helpful, the Examiner is respectfully requested to contact the undersigned attorney.

Respectfully submitted,

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Date



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